

# Extending your core applications with LANSA

The core enterprise applications that run businesses – whether in-house developed, packaged or a hybrid – represent a huge investment. The investment is not just in purchasing or building the code, it is even more in the customizing, testing and implementation.

Many organizations already have a solution in place that's good in essence, but that may need additional functionality, Web extensions, better integration with other parties or applications, and a more productive development and maintenance environment.

This article showcases companies who use LANSA technology to build on the business application foundation they already have in place, by extending the valuable core functionality into open, modern and integrated computing environments that can be shared with customers and business partners

For this article we have categorized the extension examples in four main project areas:

- New and modernized functionality for internal users
- Internet self-service to third parties
- Real-time Data Exchange with other organizations
- Business Process Integration between applications under own control

Most of our customers have used LANSA to improve multiple business areas and could

be featured under more than one category heading. The examples below are simplified for clarity.

## New and Modernized Functionality for Internal Users

Whether you want to modernize existing functionality or develop new functionality, a key role in all LANSA modernization and development products is the LANSA Repository, which allows you to centrally define data and business rules that are then applied whether the data is accessed by a Web, Windows or 5250 application. This removes the need for double and often inconsistent maintenance efforts and protects your data integrity.

**Visual LANSA**, our flagship application development tool, provides a high level

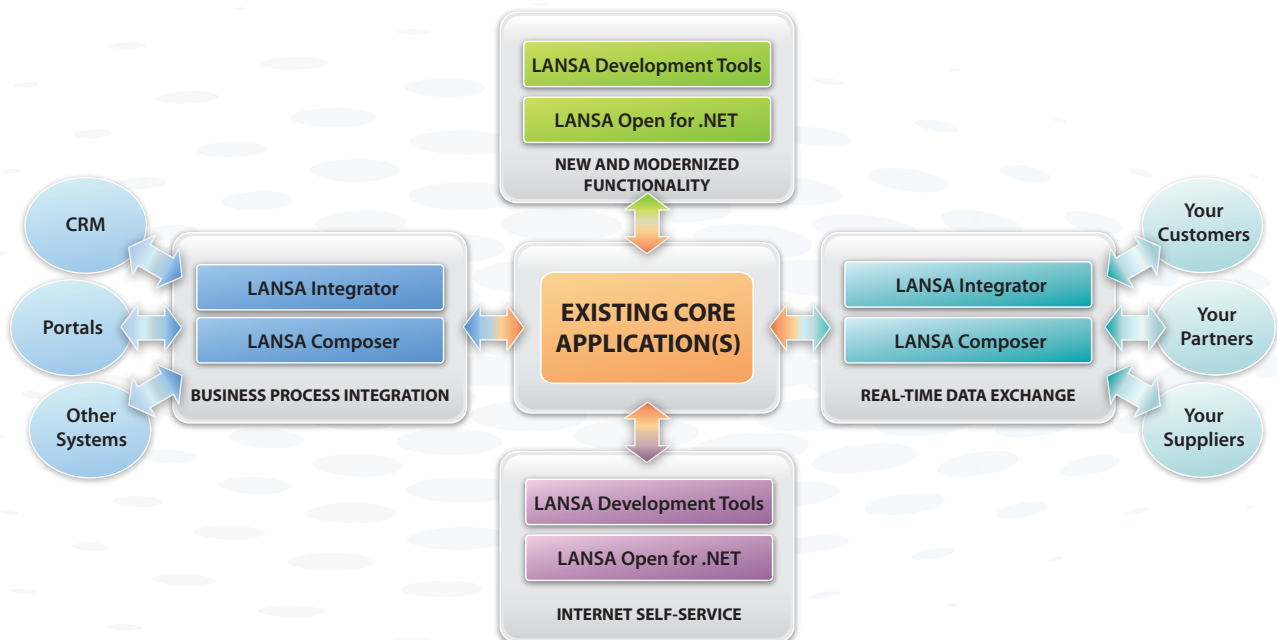


**INDUSTRY SHOWCASE**  
by Marjanna Frank

development language that is very productive, as evidenced by the small project teams our customers have. You can build Web, Windows rich-client and 5250 applications with Visual LANSA and it will generate the underlying code that's best suited for the application and deployment platform (C++, RPG, XML, HTML etc). Applications developed with Visual LANSA run independently of the underlying hardware, operating system and database technology.

Visual LANSA includes a framework facility for very rapid development. It also includes Web Application Modules (WAMs), component-based XML/XSL technology for building applications that can deliver content in multiple formats such as HTML, WML, or XML from a single WAM component.

**RAMP** is a 5250 modernization solution with a prototyping and design framework that enables you to: Reface the best parts of your existing application; Re-engineer the cumbersome parts; Plug-in brand new Windows and Web components. Refacing is with aXes, which was acquired by LANSA in early 2009. Re-engineered and new functionality can be based on Visual LANSA or any other technology. →



**LANSA Open for .NET**, a class library that exposes services (incl. IBM i data and programs), is for those scenarios where Windows developers want to use their existing .NET skills to create applications that access IBM i data and functionality. Using LANSAs Open for .NET, data access is fast and secure, plus Windows developers don't have to understand the IBM i platform or duplicate the core enterprise business rules in their Windows applications.

**Walon** is the leading supplier of finished vehicle logistics services to the UK automotive industry, responsible for over 1.2 million vehicle movements each year on behalf of vehicle manufacturers. Walon used LANSAs WAMs to extend its core RPG-based Vehicle Tracking Management System (VTMS).

One of these extensions is a real-time Workshop Management Control system. Historically, Walon would record the budgeted time for modifications that were done to a vehicle, regardless of the actual time taken. For a transparent insight into actual time spent and improved workshop management, Walon installed screens and scanners beside the technicians' work bays, so they can register each job as it is done. Managers can monitor the efficiency of the workshop and individual technicians in real-time through a WAM-based dashboard application.

Colin Williams, Head of IT at Walon, said, "Using the skills of our own development team, we have been able to deliver major new products and services. Our VTMS still sits virtually unchanged behind the new functionality, but with LANSAs we now have better tools to develop new functionality and front-end applications."

**Francis Marion University (FMU)** is one of South Carolina's 13 state-supported universities, providing strong liberal arts based programs. FMU is using RAMP to progressively modernize a large RPG-based student administration system.

Robin Moore, Director of Campus Applications and Data Services, said, "We decided to modernize the student registration module first, because registration only happens a few times each year and 5250 programs are especially hard to navigate for new and infrequent users. Another good reason to tackle this module first was that it needed new functionality, such as photo identification and email integration."

The modernized module contains about 45 tabs with refaced RPG programs, while five tabs contain completely new functionality developed in Visual LANSAs. In addition, the search, sort and navigation programs are all new and automatically generated by the RAMP framework.

Moore commented, "Eventually we want to have an environment where there is no reliance on RPG and deployment is graphical and cross-platform. Our student administration system includes about 8,000 programs and 4,000 files. Using RAMP we can cost-effectively modernize and redevelop those modules that have a high priority and gradually get there."

**Eagle Systems, Inc. (ESI)** is part of the Eagle Group based in Washington, USA, and a leader in intermodal transportation with locations throughout the USA and Canada. Using Visual LANSAs Framework and WAMs, ESI built a dispatch system, called eDray, which extends and integrates with ESI's core

Synon 2E-based logistics system.

The graphical interface of eDray creatively mimics the card-based manual system. Small boxes, representing containers, can be dragged from one location to another and right-clicked to select functions like re-scheduling and changing drivers or status. LANSAs Integrator is used to exchange dispatch information via SMS with drivers and send status updates to customers.

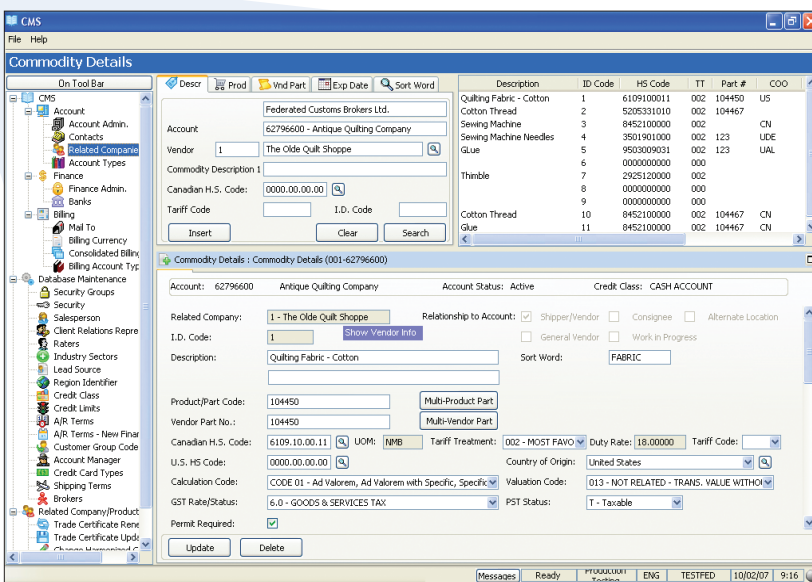
Larry Ronhovde, President of Eagle Information Systems, said, "Our decision to use the Visual LANSAs Framework saved us a lot of time, especially considering we were new to large Windows-based projects. The framework acts like an on-site mentor who helps get things done the right way the first time. It gave us a head start on proper coding techniques and standards, instead of starting with a blank page."

**The Federated Group**, based in Mississauga, Ontario, Canada, provides a complete range of customs and logistics services across North America and around the world. Federated used the Visual LANSAs Framework to deliver a Client Management System (CMS) that integrates directly with multiple IBM i back-end systems. The Windows rich-client system is distributed to hundreds of users in over 50 locations using LANSAs Just-in-Time deployment.

Nancy Riddell, IT Director at the Federated Group, said, "Using LANSAs triggers to update the existing databases saved us from having to customize over 400 programs and let us continue to use the existing customs, accounts receivable and freight systems without major modification. With this approach, we can modernize and redevelop these systems at our own pace with minimal disruption to the business."

**Chantiers Chibougamau**, based in Québec, Canada, has been manufacturing highly competitive wood products for over 40 years whilst addressing concerns about sustainable development. To enhance the efficiency of the interactions between Windows applications and the IBM i server, the company's developers used LANSAs Open for .NET. Windows integration is with ScoopSoft, a solution for the wood products industry from LANSAs Partner GFI Business Solutions.

"LANSAs Open for .NET allows client applications developed in Visual Studio to access IBM i data much faster than before by using the server's functions," said a representative from the company's IT team. "Applications that use this middleware include a fuel distribution and a mass weighing solution. We are impressed with the LANSAs Open for .NET response time." →



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## Internet Self-service to Third Parties

To open up your core application for self-service access to customers and other third parties, you can use the same tools as described in the previous section.

In addition we offer **LANSA Commerce Edition**, a self-service framework solution for order entry, plus account, price and inventory inquiry. It meets most, if not all, standard B2B (Business-to-Business) eCommerce requirements and can be "bolted on" to any ERP solution. It also contains B2C (Business-to-Consumer) functionality.

**Honda Australia Motorcycle and Power Equipment** distributes motorcycles, marine power equipment and personal watercraft through over 1,000 dealers. Honda uses the Movex ERP for its completely built units business, while parts and warranties are managed with HiPack, a custom RPG solution built by Honda's head office in Japan.

Honda provides its dealers with a LANSA-based Web solution for sales registration and warranty claims. The site also allows dealers to upload orders directly from their system to Honda's using LANSA Integrator technology. The real-time integrated LANSA Web solution proved far more popular than the hosted solution Honda previously used.

"We find LANSA the most efficient way to deliver a Web application. The LANSA site runs on the same server as our core HiPack and Movex systems, calls some of their logic and uses the same databases. There is nothing to install or maintain on the client side, so any authorized dealer with a PC and browser can securely access the application," said Craig Bassett, IT Manager at Honda Australia MPE.

**Blackmer**, located in Michigan, North America, is the world's leading manufacturer of pumps and compressors for the transfer of liquid and gas products. Blackmer used LANSA Commerce Edition to give distributors online access to orders and account information in its BPCS ERP, along with a rules-based configurator for custom assembly orders.

The Web configurator reuses thousands of questions/answers and business rules, which were already available in BPCS, and feeds specifications directly into the BPCS file structure. It allows for the configuration of the most complex and diverse application pumps.

Christopher Kanous, IT Director at Blackmer, said, "LANSA provided rapid delivery of standard eCommerce functionality plus the tools and services for a Web configurator for custom orders at a significantly lower price than the competitor's solution. Another major decision point was LANSA's direct integration into our ERP system."

**Many more wholesalers and manufacturers** use LANSA-based Web



*Many LANSA customers have achieved significant efficiencies by providing their business partners with self-service Web access.*

solutions alongside their BPCS, JD Edwards, MAPICS, Movex, PRMS, System21 and other packaged and in-house developed ERP systems.

Similarly, **many insurance companies** use LANSA to provide agents and policyholders with Web self-service access. MDC, a LANSA business partner in Ireland, developed a Web-based insurance framework, called InsureIT. Key features include a rating engine, presentation templates, a rules database and audit trail logging.

**Allianz Ireland** is one of Ireland's largest multi-line general insurance companies. Allianz's back-end solution is Insure/90, an RPG-based solution from Computer Sciences Corporation (CSC). After the success of several B2C quote & buy sites for car, home and pet insurance (based on InsureIT). Allianz chose LANSA as their strategic Web development tool for all B2C and B2B projects.

Allianz also extended its broker communication with LANSA Integrator-based Web services, allowing direct exchange of information with its largest broker.

**Merchants Insurance Group (MIG)**, with its headquarters in New York, markets tailored property and casualty insurance products through over 500 independent insurance agents. MIG's back-end system is a heavily customized COBOL-based WINS package.

MIG extended their WINS insurance system with a LANSA-developed Web site. Using the site agents can get quotes, issue policies, enquire on policies and claims and view different aspects of billing. Policyholders can view their policies and bills and pay online.

**Save the Children USA** is the leading independent organization creating lasting change for children in the U.S. and around the world. Save the Children's core donor system is IBM i and Synon-based.

Save the Children USA used LANSA WAMs to deliver a Web site that allows prospective child sponsors to use sophisticated search functions to identify a child to sponsor. LANSA Integrator is used to manage and process various donor communications, including a personalized PDF welcome kit. Sponsors can also obtain a PDF of their official charitable tax deduction receipt.

**Agilysys, Inc.** provides one of the world's most popular integrated hotel and casino property management solutions. The company's Lodging Management System® (LMS) powers many of the largest hotels in the world, including most of the mega-hotel-casinos in Las Vegas.

The LMS has been extended with LANSA-based Web solutions since 1997. One of these was LMS ResNet, the first real-time, fully integrated Internet hotel booking system in the world. A large proportion of today's U.S. Internet room sales are still made via LMS ResNet. LANSA was also used for LMS GuestExpress, a wireless facility that enables hotel agents to program room keys and to check in and check out guests in or nearby the property.

More recently, Agilysys used Visual LANSA to develop its new generation property management system called Guest 360™, expanding the company's market share as the application can now be deployed cross-platform. →

## Real-time Data Exchange with Other Organizations

Direct Application-to-Application (A2A) or Business-to-Business (B2B) integration avoids the need for manual intervention in the process flow between business partners. There are a multitude of methods for integration, in which XML, EDI-INT and Web services have emerged as worldwide standards.

**LANSA Integrator** enables integration of A2A and B2B transactions through XML and Java services. It allows bi-directional XML – and other data formats – to be exchanged between business partners, regardless of platform. It also enables integration of user-written Java services with RPG, COBOL and other non-Java applications.

**LANSA Composer** is built on the same technology as LANSAs Integrator, but in addition to the transport and transformation services, it also offers data mapping, process flow orchestration and administration facilities, making it easy to set up procedures for EDI and other co-ordinated exchange of transactions.

**LANSA Data Sync Direct** is another product built on LANSAs Integrator technology. It is a GS1-specific solution for manufacturers and distributors wanting to comply with retailer requests for exchanging item information via the GDS Network.

**E. P. Barrus Ltd**, located in the U.K., designs and manufactures engines and distributes a diverse range of products. Barrus' core ERP system is a customized System21 implementation. Barrus uses LANSAs Integrator to exchange EDI messages with its trading partners including B&Q, the largest do-it-yourself chain in Europe.

Barrus also uses LANSAs Integrator on its dealer Web site to utilize the Web services from Epitomy, a company specializing in exploding diagrams, so dealers can search for parts without knowing the part number. A LANSAs Integrator-built Web service links from Barrus' order site to Epitomy's Web site, where dealers dissect engine diagrams to select the part they need. Once the part is selected, a SOAP message is relayed back to the Barrus Web site, where the dealer can continue with the order.

Dave Hansford, IT Manager at Barrus, said, "With LANSAs we have the flexibility to accept and send business transactions in a variety of formats, using many different communication methods. LANSAs is easy to use and complements our existing skill set, allowing us to handle EDI and SOAP projects with our own business knowledgeable staff."

**ViaTech Publishing Solutions**, headquartered in New York, is the authority in on-demand destination printing. The process of uploading print files, customizing them and ordering copies to be delivered anywhere in the world, is entirely automated.

LANSA Integrator is used when customers upload their PDF print files to ViaTech's Web site, when the site connects to UPS for a shipping price estimate and for validation of credit card payments. LANSAs Integrator is also used to accept and process the XML orders of customers who have their own internal systems to manage print materials.

**The Terminix International Company**, headquartered in Memphis, Tennessee USA is part of the ServiceMaster family of brands and the largest termite and pest control company in the world. The Terminix LANSAs-based core

system is used by 12,000 employees at over 400 locations and 5,500 service specialists with wireless hand-held devices.

Recently, Terminix used LANSAs Composer to automate the remittance processing with third parties, such as mortgage providers, who include with their monthly statements an insert advertising Terminix's services. Homeowners who take up the advertised offer will see the fee for Terminix's services added to their next monthly statement. The process of accepting the customer's order, invoicing and payment processing is completely automated between Terminix and its partners, with LANSAs Composer processing multiple EDI transmissions for each customer.

**Body Corporate Services (BCS)**, with over 20 branches on the eastern seaboard of Australia, provides a comprehensive range of services to facilitate the smooth running of strata plans and other title schemes.

BCS uses LANSAs Integrator to extend its core Property Management System with integration points to third parties. These include integration with the Australian Taxation Office for the preparation and filing of tax statements. Also integration with a mailhouse for outsourced printing and mailing of periodic statements. Plus integration with debt collection agencies, insurance companies and banks.

BCS also uses LANSAs Integrator for integrating internal applications, such as its WebSphere customer portal and a Windows-based document management system, and for generating legal documents in PDF format.

**R.C. Bigelow, Inc.** is a family-owned company based in Fairfield, Connecticut that has been producing quality teas for over 60 years. Bigelow uses LANSAs Data Sync Direct (DSD) to synchronize its BPCS Item Master information to Wal-Mart and other retailers.

The project leader of Bigelow's GS1 implementation team, said, "LANSAs Data Sync Direct complements BPCS with a large number of attributes. For example, we didn't describe aspects such as the height, weight, and depth of finished products in BPCS. We only had this information in individual PC documents. Now we keep the data centrally in the DSD data Repository. And because the BPCS and LANSAs solution are integrated, we don't have double file maintenance. We have ended up with a much cleaner and more complete set of data."

**Over 300 companies** use LANSAs Data Sync Direct as their Global Data Synchronization Network (GDSN) integration solution. LANSAs DSD includes facilities for managing Global Trade Item Numbers (GTIN) and workflow management. →



*LANSA's integration solutions automate the exchange of information between trading partners.*

## Business Process Integration (BPI) for Applications under own Control

Many companies use a mix-and-match approach for their IT solutions, whether by choice or inherited, packaged or in-house developed. Typically some of these solutions are Windows-based (client as well as server), some are IBM i-based and a growing number are hosted applications.

Rather than duplicate data and functionality, these applications should share and integrate. For BPI between these internal systems, you can use the same LANSA integration tools as for third party integration.

**The Greenery**, headquartered in the Netherlands, is one of Europe's leading fruit, vegetable and mushroom auctioneers. The Greenery uses LANSA Integrator for exchanging information between its IBM i core administration system and several packaged Windows-based applications, such as the GreenMate auction system.

GreenMate automatically collects and publishes produce information from the IBM i using LANSA Integrator. This happens a short while before a product is scheduled to be auctioned and again at auction time.

"Where available, we prefer packaged solutions above in-house development. Company mergers and acquisitions have contributed to the variety of systems as well," said the Greenery's Development Manager, "Creating fast and reliable links between these heterogeneous systems is becoming more and more important."

**Brewers' Distributor Ltd (BDL)** is Western Canada's leading distribution and container return service for the brewing industry. BDL's core ERP system is JD Edwards World. BDL used LANSA Integrator and Visual LANSA to deliver a solution that integrates with an automated production line system. The integrated Warehouse Automation System saves BDL nearly \$500,000 per year.

Andrew Hobbs, Manager of IT Applications at BDL, said, "I strongly favour Web services for any system integration, as it fits in our plan to gradually move to an SOA environment. We used LANSA Integrator SOAP Web service requests to have JD Edwards communicate with our line control software, Red Prairies labor management and other systems."

**The Hillman Group**, based in Cincinnati, Ohio, keeps over 21,000 retailers stocked with an assortment of over 55,000 small hardware items. Hillman runs three different ERP systems. They made a customized version of LANSA Data Sync Direct the main Product Information System to feed their ERP systems as well as the product catalog (and, last but not least, the GDSN).

The screenshot shows the 'THE GREENERY thinkloop system v1.0.0.27' interface. It features a central circular auction display with a green background and white dots representing items. The display is divided into three sections: 'Munt' (1 cent), 'Prijs' (5,67), and 'Koper'. Below the display is a 'vaste prijs ingave' section with 'F3' and 'F2' buttons. To the right, there are several data tables and status indicators.

**Status**

VIPS OK Lijn GATEWAY AUDIO

**Komende partijen**

blak	artikel	inhoud	loc	H2B	LIE
1	1938 PAP GE75 EG I	5	DOOS	400	400
2	31937 PAP GE75 U I	5	DOOS	100	200
1	537 KK36-41PP PEM EG I-5	36	PB MI	70	70
2	537 KK36-41PP PEM EG I-5	36	PB MI	11	11
3	538 KK36-41PP PEM EG I	36	PB MI	0	12
1	32720 TRC XF CH EG I-5	3	DOOS	200	153
2	32720 TRC XF CH KPEG I-5	3	DOOS	170	520

**Eigen transacties**

blak	artikel	loc	aantal	prijs	sub	apb
1937	PAP GE75 U EG I	DOOS	H2B	10	5,94	0 0
1937	PAP GE75 U EG I	DOOS	LIE	200	5,99	0 0
1937	PAP GE75 U EG I	DOOS	H2B	10	5,99	0 0
1937	PAP GE75 U EG I	DOOS	H2B	10	5,77	0 0

**Actuele partij**

blak	inhoud	H2B	LIE	Min.Prijs	Min.Afn.
1	1937 PAP GE75 U EG I	DOOS	5	270	500
2	1937 PAP GE75 MSTU I	DOOS	5	700	200

**Informatie**

Berichten: Overige klikken | Looop

Login succesvol!  
 \*\*\*\*\*  
 Ongeldig wachtwoord  
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The Greenery uses LANSA Integrator for exchanging information between its IBM i core administration system and GreenMate, a Windows-based auction systems.

Hillman also uses LANSA Integrator for integration with a WebSphere portal, through which the company runs its corporate reporting. "Instead of having to hire Java experts, we are able, with our own staff and using LANSA Integrator, to deploy RPG and other non-Java applications in our WebSphere portal environment," said Kirk Townsley, Application Development Manager at the Hillman Group.

**Export Development Canada (EDC)** is Canada's export credit agency, offering innovative commercial solutions to help Canadian exporters and investors expand their international business. EDC uses ACBS, a largely LANSA-based commercial lending and trading system, and has recently delivered three SOAP Web services integration solutions, using LANSA Integrator.

EDC's first Web services project was to automate the disbursement process workflow, as it involves multiple business areas. A second project has improved the delivery method of customer statements, by generating and distributing a graphical PDF document. A third BPI project exposes ACBS information to EDC's Siebel CRM implementation.

**Robinson Manufacturing Company**, based in Dayton, Tennessee in the U.S., is a supplier of basic and fashion boxer underwear, loungewear and activewear to both the retail and wholesale markets.

Recently Robinson started a wide variety of integration projects using LANSA Composer, including: Moving inbound EDI Purchase Orders from Gentran to the ERP system; Processing Web visit logs into a database for reporting; Processing logs regarding PC

backups and email alerting users with missed/failed backups; Report distribution that includes scheduling, creating and emailing of reports.

**Truvo Belgium** is the market leader in local search and advertising and publishes the printed and online Golden and White Pages phone directories. Truvo uses LANSA for its core IBM i information system. Truvo's 400 sales reps use a .NET sales application.

Using LANSA Integrator-built Web services, sales reps can download customer portfolios from the core IBM i application into their .NET sales application. Next, with input from the customer they can build a number of new advertising scenarios on their laptop. When the customer selects a scenario, the sales contract and advertisement specifications are created in the .NET application and uploaded to the IBM i via a LANSA Web service, which parses it into the DB2 database for further processing by the back office systems.

The graphics department then works on the advertisement based on the specifications and instructions that are kept on the IBM i. The actual graphical design is done on Apple Macintosh computers and the resulting advertisement is stored on Truvo's UNIX server.

## Conclusion

LANSA provides practical tools and solutions to extend, modernize and integrate applications across multiple platforms. By practical we mean that LANSA is easy to learn, productive and cost-effective, allowing companies to deliver solutions with their own small development teams. ■